(1) HW Hotline →

(2) Then Pick up and do the Warm Up

as soon as you get to part **1c,** have <u>one</u> person in your group pick up any needed graphing calculators <u>from MR.C</u>.

Warm Up/Notes
1.1.3

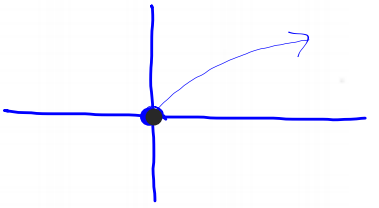
1a. Can -16 be used as an input for $f(x) = \sqrt{x}$?

<u>NO</u>, therefore -16 is <u>not</u> part of the domain of this function

b. Find two more values that are <u>not</u> part of the domain of $f(x)$

-3 -7

c. Make a sketch of the graph of $f(x) = \sqrt{x}$ →



d. Describe the domain and verify with the "TABLE" on your Graphing Calculator.

$0 \leq x < \infty$

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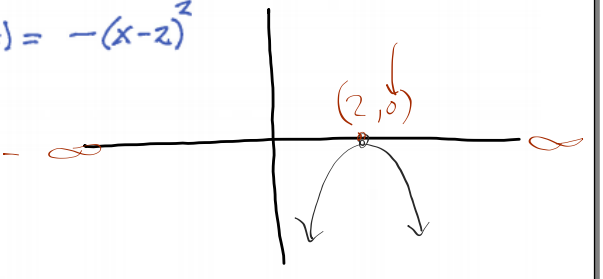
2. a. Make a sketch of $g(x) = -(x-2)^2$



b. What is the domain?

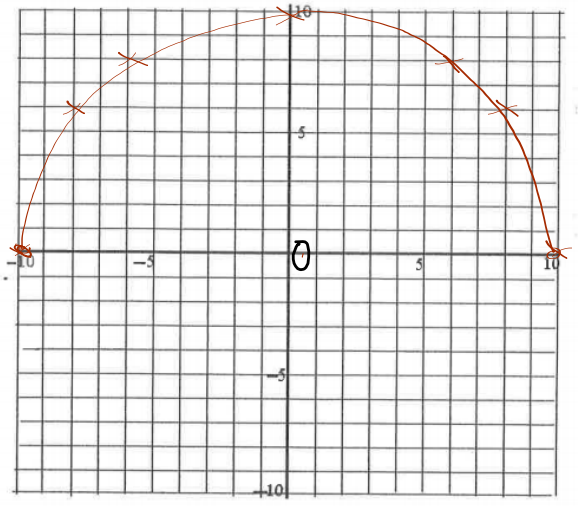
$-\infty < x < \infty$

c. What is the range? (of possible y-values)

$-\infty < y \leq 0$

3. Now make a detailed graph of $f(x) = \sqrt{100 - x^2}$

x	y

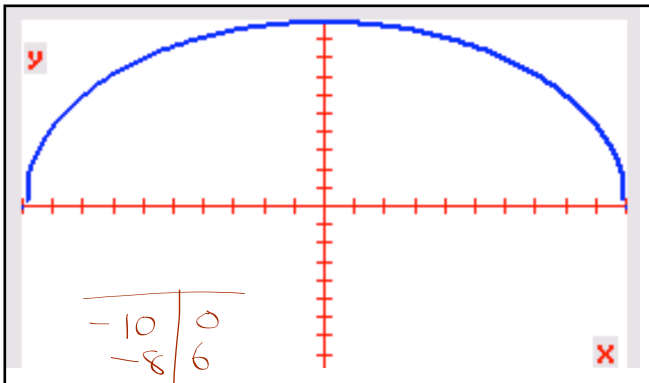


Describe the domain.

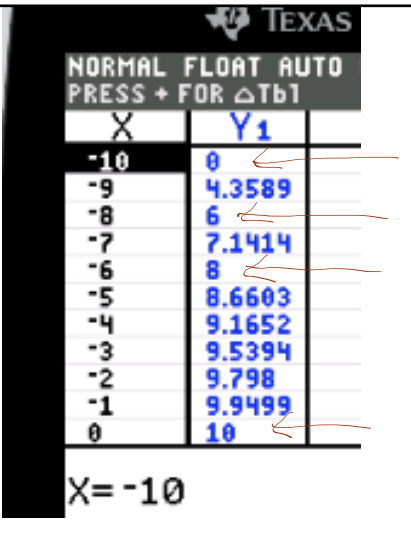
$-10 \leq x \leq 10$

Describe the range.

$0 \leq y \leq 10$

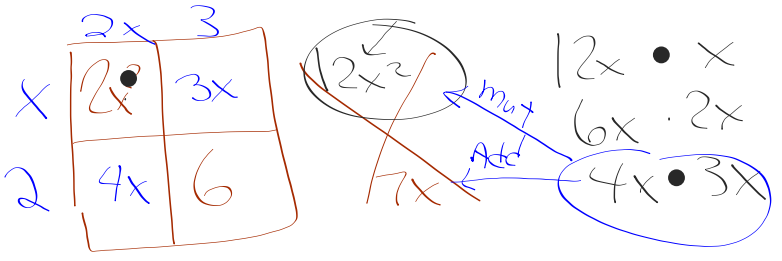


-10	0
-8	6
-6	8
0	10
6	8
8	6
10	0



④ Factor $2x^2 + 7x + 6$

$(2x+3)(x+2)$



$(2x + 3)(x + 2)$

⑤ $(2x^3)(-5x^1) = -10x^4$

$(4x^2)^2(10x^2)$

$4^2(x^2)^2 \cdot 10x^2$

$16 \cdot x^4 \cdot 10x^2$

$160x^6$

$(x^2)^5$

$x^2 \cdot x^2 \cdot x^2 \cdot x^2 \cdot x^2$

HW Questions ?

From now on •

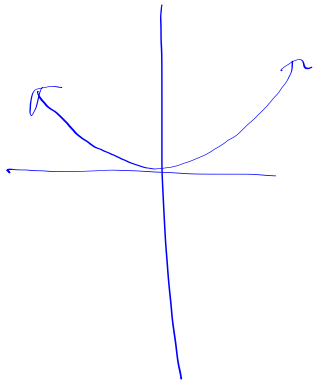
16)

11-16

1-20

Make a table and graph the function $f(x) = \frac{1}{2}x^2$.

x	y
(−2)	2
−4	8
0	0
2	2
4	8



1-25

$$3(x-2)-2(x+7)=2x+17$$
$$3x-6-2x+14=2x+17$$
$$x+8=2x+17$$
$$-9=x$$

13 f

$3x^2+14x-5=0$

$(\quad)(\quad)=0$

quad. term → $3x^2$; constant → -5

quad term × constant

$3x^2$ | | ; | -5

$-15x^2$; $14x$ ← linear term

× | $3x^2$ | $15x$
$3x$
-1 | $-x$ | -5

$-15x^2$; $-x$ | $15x$; $14x$

13d $x^2 - 5x = 0$

↑ factor out GCF

16 a) $y = 3x + 15$ b) $y = 3 - 3x$

when $x = 2$

$x = 0$

what is the y-intercept ?

slope 5
$(0, -2)$

(a) $y = 5x - 2$

(b) find, $x = 2$

$y = 5(2) - 2$
$= 8$

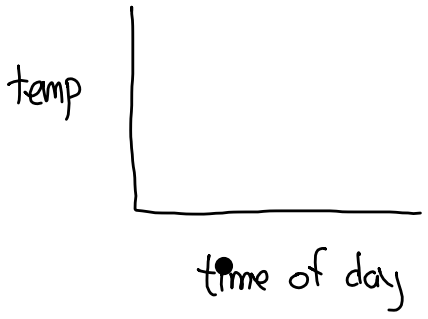
17 $f(x) = x^2 + 2x + 1$

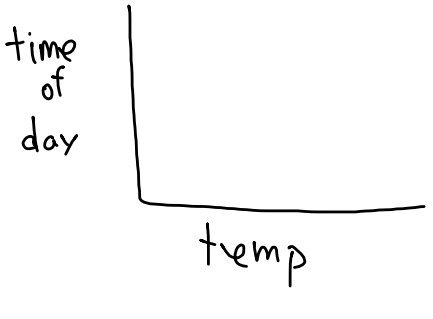
(a) $f(3) =$

(b) $f(-4) =$

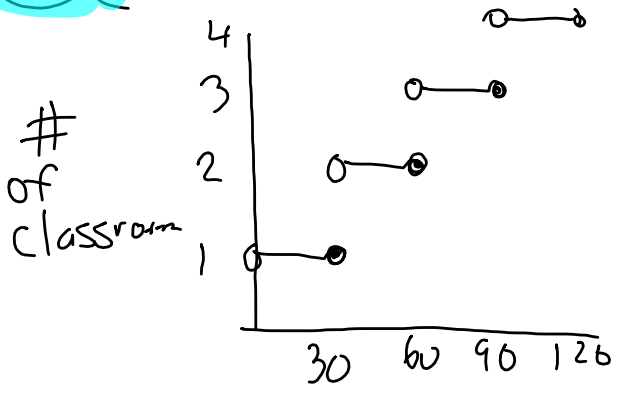
(c) $f(-22.872) =$

(18) c Sketch a graph that shows the relationship between temperature and time of day





(23)



inputs

0 to 120

outputs

0 to 4

When you turn in the HW solutions pick up a syllabus.

quick
LCQ

everyone must turn
their desks forward

When everyone in your pod has turned it in, the return desks to normal position.

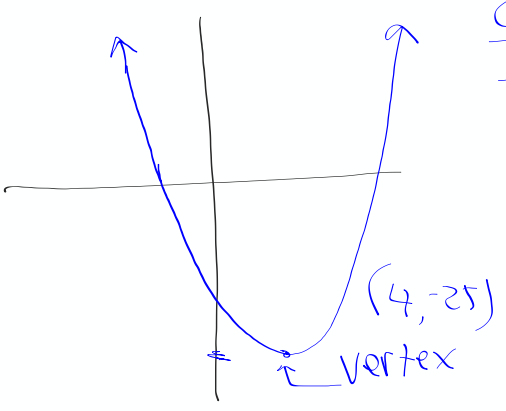
TODAY:

Find **Domain**
and **Range**

of a function given either its graph or its equation.

Sketch & Analyze

$y = (x+1)(x-9)$



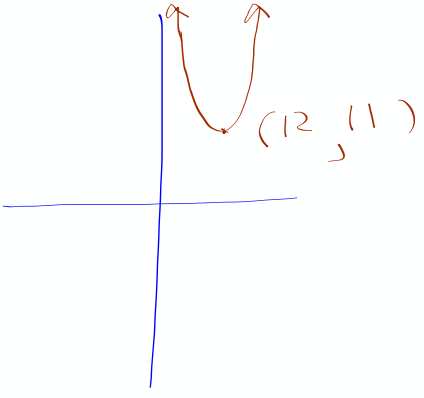
domain

$-\infty < x < \infty$

range

$-25 \leq y < \infty$

$y = (x-12)^2 + 11$



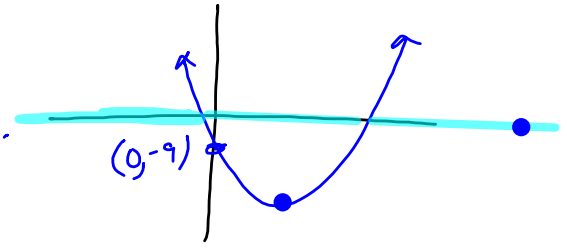
Many days we will use what are called "Core Problems" todevelop your understanding of the skills andconcepts.

I want you to record this process in your notes.

Do 1-27 ab

I'll work along with you.

Start by making a quality labeled sketch



window settings

$-10 < x < 10$

$-50 < y < 10$

A parabola with

a vertex (,)

and y-intercept of (,) and

x-intercepts of

(,) (,)

domain

range

1-27

a) $y = (x+1)(x-9)$

describe the graph ?

b) What window ?

c) How are settings related to domain and range?

Vertex, x-intercepts, and y-intercepts

B.B.

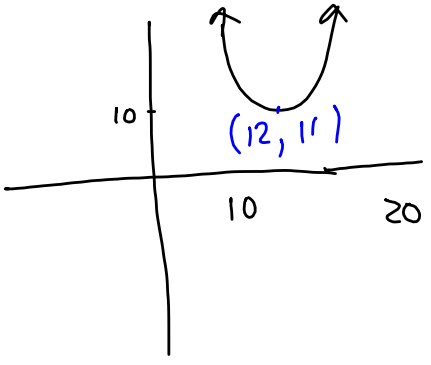
continue to 1-28 and 1-29a

↑ sketch

- Be sure everyone in your group is solid before anyone goes on to #1-29

1-28 $y = (x-12)^2 + 11$

b) Settings



$\leq x \leq$

$\leq y \leq$

*

c)

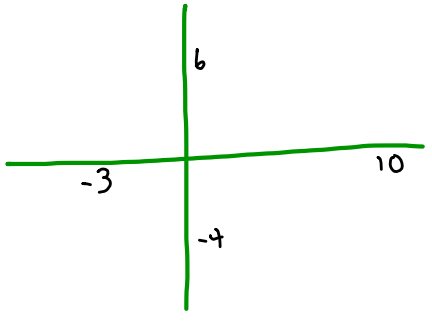
domain

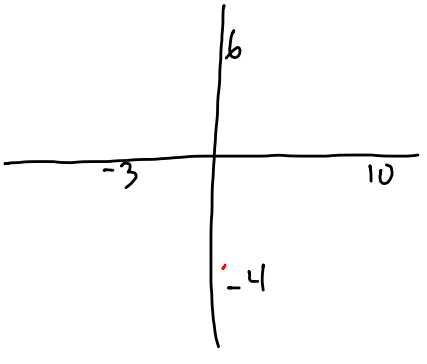
range

1-29a Sketch a function *

domain $-3 \leq x \leq 10$

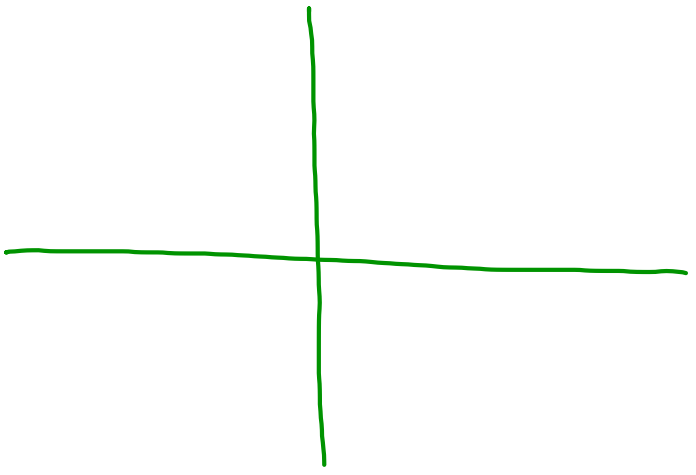
range $-4 \leq y \leq 6$





b) domain: all real numbers $-\infty \leq x \leq \infty$

range: only 2, 4, 5, 8



1-30

$5x - y = 35$ $3x + y = -3$

Assignment

pdf save

1....34-36, 37acde, 38, 40a

If getting a graphing calculator is a hardship at this time for your family, then see me about getting a loaner from the math department. See me before you leave school today.